IN FEBRUARY 2016, news broke about toxic air hotspots around two glass manufacturers in Portland. The public reaction was dramatic: Portlanders were concerned about the air their children were breathing and the soil in their backyard vegetable gardens. Officials deemed the situation a “public health crisis,” and activists raised questions about the ability of state agencies to appropriately respond.

The reaction from the PSU Institute for Sustainable Solutions (ISS) was equally prompt. ISS worked with air quality research chemist and PSU professor Linda George to create a comprehensive two-year research project that would provide timely, neighborhood-level data on heavy metal air pollution. Leveraging funding available from the James F. and Marion L. Miller Foundation, ISS contributed half the cost of the $125,000 research program and staff set about creating a coalition of local government agencies to support the rest. What resulted was an unprecedented research partnership between PSU, the City of Portland, and Multnomah County aimed at serving the region’s residents by providing a pathway toward healthier air.

The rapid response to toxic air concerns highlighted ISS at its best—nimble, strategic, collaborative—and illustrates the role that sustainability has come to play at PSU.

On a world stage at the United Nations Paris Climate Conference in November 2015, President Obama invoked the words of Dr. Martin Luther King, Jr. by stating: “there is such a thing as being too late. And when it
comes to climate change, that hour is almost upon us.” Climate change presents serious near-term challenges to the economy and society of Portland and the Pacific Northwest—disruption of the food and forest industries, shrinking water supplies, severe and unpredictable weather events, accelerated population growth, and public health impacts, among others.

Building on ISS’ ability to respond quickly to community needs and the demonstrated sustainability expertise of faculty and students in engineering, social sciences, urban planning, environmental studies, business, and more, PSU and the region are well positioned to make major contributions to climate change challenges. ISS will increasingly direct its efforts to help address this issue that studies estimate directly contributes to the death of more than 400,000 people a year and costs the world economy more than $1.2 trillion annually.

In January 2016, Robert Liberty joined ISS as its director, bringing with him deep experience in the public and social sectors. Robert’s charge is two-fold: to deploy the University’s sustainability assets to benefit the community, and to strengthen revenue development so that at the conclusion of the James F. and Marion L. Miller Foundation gift in 2018, ISS and PSU continue to be a lever for sustainable action across the region.

The transition is more than fiscal. It’s a process of crystallizing what ISS can do for the University and the community that no other organization can. As a link between Portland and PSU on topics including air quality, climate action, neighborhood livability, housing affordability, green infrastructure, and ecosystem services, ISS is quickly becoming a national model for city-university partnerships that deliver tangible outcomes and positive change in the communities and regions they serve.
STUDENT STORY

Armed with a passion for addressing displacement alongside climate change, urban planning graduate students Adam Brunelle and Katie Selin worked with ISS’ Sustainable Neighborhoods Initiative to amplify the efforts of Livable Lents—a community project to engage residents in improving the livability and affordability of the Lents neighborhood. The pair conducted surveys, created maps, and held culturally specific focus groups in six different languages for underrepresented communities, including African Americans, Native Americans, immigrants, renters, and youth, to gain a better representation of community concerns than urban planning processes typically garner. Livable Lents will use this information in proposals it plans to submit to city agencies.
Sustainable Neighborhoods Initiative

The Sustainable Neighborhoods Initiative provides rich learning opportunities for students to engage in real-world sustainability issues while adding capacity to help community organizations advance livability and resilience projects in their neighborhoods. During the 2015-16 academic year:

More than **700 students from 45 classes in 9 academic departments** worked with our community on **86 neighborhood projects**.

Highlights include working with community organizations in the Cully neighborhood to develop an affordable housing strategy, constructing a survey to determine how businesses and residents in downtown Portland can reduce their energy use, and celebrating the grand opening of a community orchard in Lents that transformed an overgrown vacant lot into a neighborhood asset—a project that multiple classes and dozens of students worked on with community partners over the course of two years.
The Portland Climate Action Collaborative matured in its second full year into a multifaceted partnership between Portland’s Bureau of Planning and Sustainability and ISS. Supported by the Bullitt Foundation and the PSU Bookstore, the collaborative produces research that is applicable and relevant to the City of Portland’s climate action goals while providing meaningful educational opportunities to PSU’s faculty and students. Featured projects include:

**Deconstruction vs. demolition policy**
A PSU study on the economics of deconstruction vs. demolition of historic buildings was key in the Portland City Council’s decision to approve a policy requiring deconstruction of unwanted buildings over 100 years old—the first policy of its kind in the nation. Deconstruction results in 90 percent of materials being diverted from the landfill and could add close to $1 million to the economy.

**Urban heat and air quality mapping**
A team of PSU faculty launched a series of interactive maps that identify “urban heat islands”—areas that can run 10 to 20 degrees hotter than other areas of the city and pose serious health risks during extreme heat waves—providing new data that Portland city planners are using to better prepare for the impacts of climate change. In the coming year the team will expand its research to other areas of the Pacific Northwest.
The Sustainability Internship Program this year placed 47 student interns with 33 organizations that advance climate action and sustainability efforts in the region, including Drive Oregon, Rose Community Development, Ecotrust, IRCO Africa House, and the City of Portland Bureau of Planning and Sustainability.

ISS also launched a new initiative to support students in gaining much needed professional experience in their fields: the STAR (Sustainability Training and Research) Grant Program offers PSU students a stipend for participating in an unpaid or low-paying sustainability-related internship or research project that they have found and secured on their own.

“Thanks to the stipend, I was able to focus fully on creating and fulfilling a position related to my studies with an organization that truly needed my support, rather than just finding an existing job outside the realm of my studies.”

— Melia Tichenor, PSU student & recipient of a STAR Grant
ALUMNI STORY

Heber Michaels came to PSU with the intention of learning as much possible about business so he could help his parents run their janitorial business. His family background, entrepreneurial drive, and course of study in economics and business helped him launch two businesses of his own while at PSU—a tow truck company and a company that recycles old tires and waste oil into an alternative fuel. As a sophomore, Heber landed a position with Oregon BEST through ISS’ paid internship program, which supported his school expenses, increased his understanding of entrepreneurship, and expanded his network. “It helped me transition from school to the real world,” he said. Heber is now working with fellow PSU alums to launch an app that connects health care services to consumers on an on-call basis—aiming to make health care more accessible and affordable.
Urban Sustainability Accelerator

When Robert Liberty became the new director of ISS in early 2016, he brought with him the Urban Sustainability Accelerator—a program launched three years ago in PSU’s College of Urban and Public Affairs to help urban areas across the U.S. implement their sustainability plans and policies.

Funded by grants from The Summit Foundation and contracts with clients around the country, USA worked during 2015-16 with three regional planning agencies in the Sacramento, California; Lansing, Michigan; and Reno, Nevada, metro areas to implement plans to replace sprawl with more compact development and promote an increase in sustainable transportation like biking and public transit.

An international influence
Since 2014, ISS Director Robert Liberty has been working with planning institutions in China to help implement the new national policy requiring urban growth boundaries around major cities, which protect farmland and other ecologically significant areas. Agencies in Kunming, Chengdu, and Suzhou, China, have looked to Oregon and the Portland metro area to learn from our 40 years of experience with urban growth boundaries.
Faculty & Student Fellows

ISS has had a network of Faculty Fellows since its inception, but in May 2016 the Institute refreshed the program and announced a new roster of 99 Faculty Fellows (and counting) that represent more than 30 departments across campus—a diverse network of faculty who share the Institute’s passion for collaboration and for using the framework of sustainability to solve complex societal problems. Fellows are working on a range of issues including the effects of urbanization, ecosystem restoration, renewable energy, health equity, and climate resilience.

In fall 2016 the Institute launched a new Student Fellows program—which quickly attracted more than 100 members—to provide PSU students from all backgrounds who are interested in sustainability with opportunities to build their professional skills, experience, and networks. Topic areas of most interest to Student Fellows include climate change, social justice, renewable energy, food systems, and the built environment.
This year was full of change and organizational growth at the Student Sustainability Center (SSC). The center gained access to new funding through PSU’s Student Fee Committee, began reporting to Student Activities and Leadership Programs, and moved to the Smith Memorial Student Union to more fully align with student leadership on campus. The SSC is a shining example of an initiative launched by ISS that is increasingly becoming embedded into broader University structures, positioning itself to secure other means of support and institutionalize its operations. Accomplishments for the year include:

- **Engaging dozens of students** in volunteer programs focused on waste reduction, gardening, beekeeping, social justice, outreach, and leadership development.
- **Launching a Seed Library** where PSU students and employees can find free seeds to plant and grow.
- **Installing two honeybee hives** at the Community Orchard on the edge of campus, an effort that garnered attention from nearly every major local media outlet.
- **Organizing educational field trips** to Zenger Farm and Bull Run Watershed that provided opportunities for students from a variety of backgrounds to explore the Portland area.
When engineering student Rihana Mungin returned to college after taking a hiatus to work, she had a renewed focus on connecting her studies with her career goals. Prior to enrolling in classes, she took a job with PSU’s Facilities and Property Management department, where she oversees preventative maintenance for campus buildings. Her dual role as staff member and student opened her eyes to the needs of both: “I saw my classmates who needed applicable projects to work on, and I saw the maintenance needs of the university.” With this in mind, Mungin partnered with the Institute for Sustainable Solutions and the Campus Sustainability Office to reinvigorate PSU’s Living Lab program—connecting students, professors, and staff with educational projects that tackle campus sustainability challenges like waste reduction and maintenance of campus ecoroofs.
Accolades

The Institute for Sustainable Solutions leads and amplifies sustainability efforts that have earned PSU national prominence. Highlights for 2015-16 include:

U.S. News & World Report ranked PSU among the Most Innovative National Universities—the only Oregon campus on the list—thanks in part to the Institute for Sustainable Solutions’ programs.

PSU ranked No. 20 out of more than 150 schools on the Sierra Club’s Cool Schools list, earning its highest ranking yet on the list that honors university sustainability practices.

PSU President Wim Wiewel was among the first to sign a newly expanded American College & University Presidents’ Climate Commitment, which in addition to supporting carbon reduction includes a commitment to help the region become more resilient in a rapidly changing climate.

The League of American Bicyclists named PSU a Platinum Level Bicycle Friendly University, the only university in Oregon and one of only five in the U.S.
Our Invaluable Partners

Our work could not be accomplished without the partnership of sustainability pioneers in Portland and beyond. We thank them for their support as we strive together to create a better future for our community, region, and world.

AASHE
Albina Community Bank
Asian Pacific American Network of Oregon
Boise Neighborhood Association
Bridgetown Bees
Bullitt Foundation
Bureau of Land Management
Cambia Health
Campus Sustainability Office
CH2M
Chinook Book
City of Portland
City Repair
Clean Water Services
Coalition of Communities of Color
Community Cycling Center
Concordia Neighborhood Association
Columbia Land Trust
Downtown Neighborhood Association
Drive Oregon
Ecotrust
Ecumenical Ministries of Oregon
Enhabit
Forest Park Conservancy
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Multnomah County Neighbors for Clean Air
OPAL Environmental Justice Oregon
Oregon BEST
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Oregon Food Bank
Oregon Solutions
Plastics Industry Association
Portland Bureau of Environmental Services
Portland Bureau of Planning and Sustainability
Portland Bureau of Transportation
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ROSE Community Development
Sacramento Area Council of Governments
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Wisdom of the Elders
Zenger Farm